

Overview and update to Surfrider's dune restoration projects on Miami Beach



Samuel J. Wright
Beach and Dune Workshop, Miami Beach
June 19, 2013

North Shore Open Space Park

Miami Beach

87th Street

North Shore Open Space Park

85th Street

North Shore Open Space Park

sericea before
, 2006

coverage:
miles

coverage:

coverage:

Wright



85th Street



Conditions for invasive improves

Treatment



change in soil conditions

soil pH ↓

Soil moisture ↑

organic matter ↑

Material decays

Leaving of material



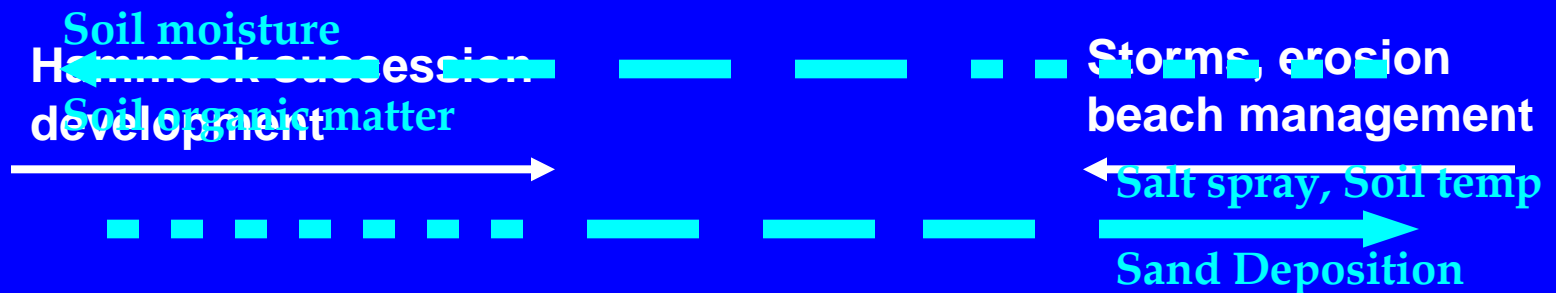
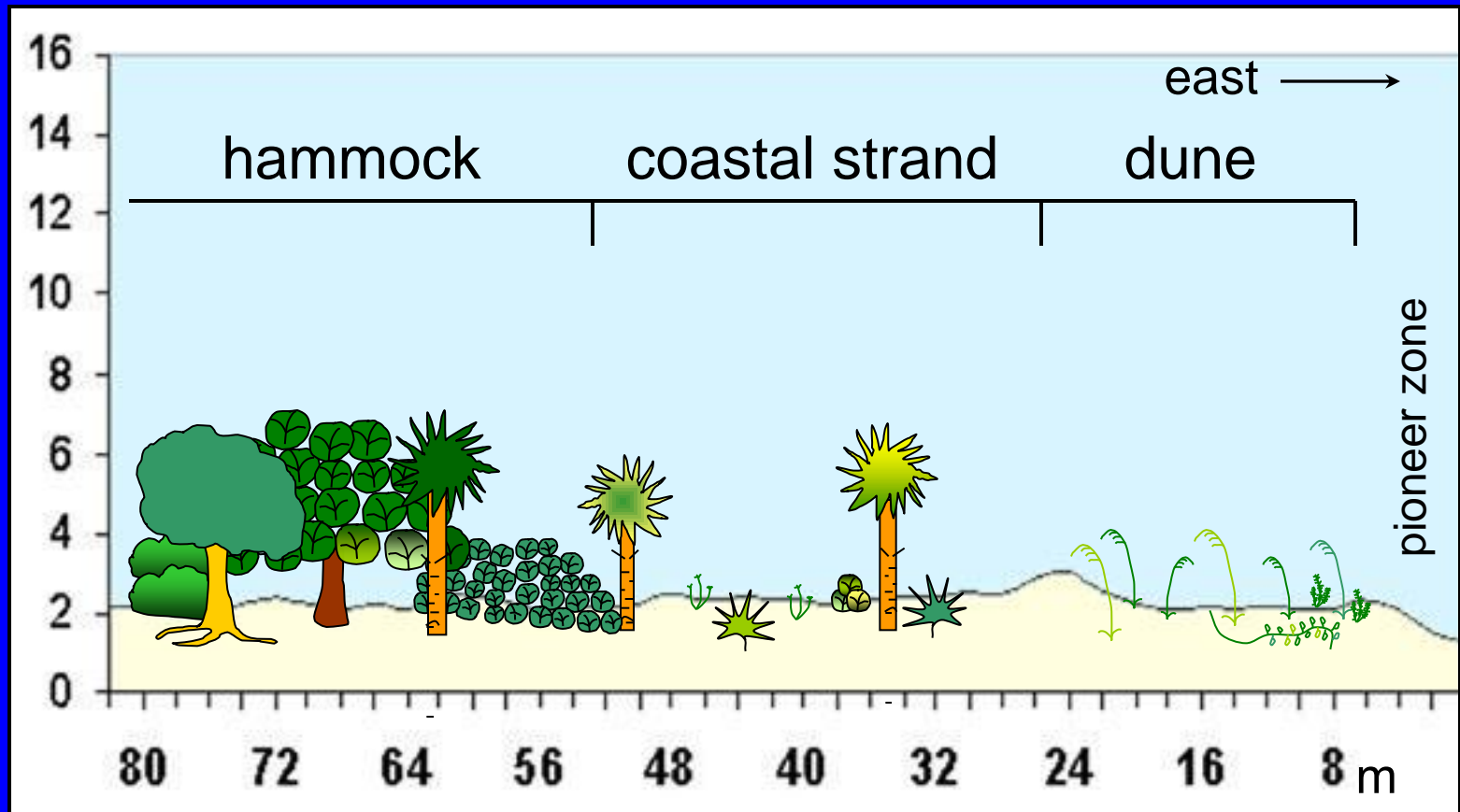






What are we trying to restore?

What is a dune ecosystem?



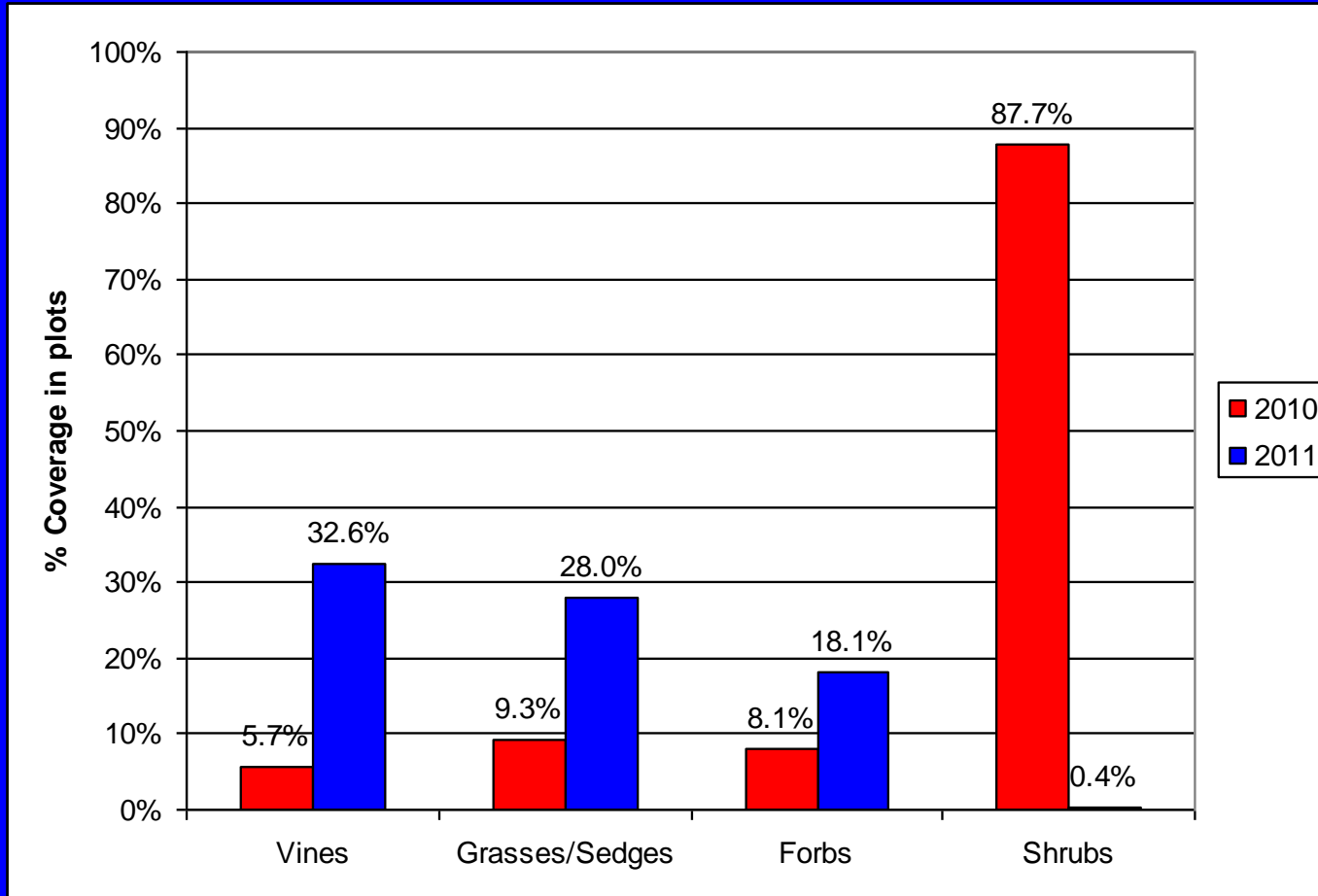
February 2011



August 2012



Response of vegetation to invasive removal



Scientific name	Common name	Qty	Status
<i>Ambrosia hispida</i>	coastal ragweed	2	
<i>Cakile lanceata</i>	sea rocket	9	
<i>Argusia gnaphalodes</i>	sea lavender	37	State endangered
<i>Chrysobalanus icaco</i>	cocoplum	9	
<i>Coccothrinax argentata</i>	silver palm	20	State endangered
<i>Dodonea viscosa</i>	varnishleaf	14	Locally imperiled
<i>Ernodea littoralis</i>	beach creeper	72	
<i>Glandularia maritima</i>	beach verbena	65	State endangered
<i>Guapira discolor</i>	blolly	3	
<i>Ipomoea pes caprae</i> ssp. brasiliensis	railroad vine	7	
<i>Iva imbricata</i>	beach elder	17	
<i>Jacquemontia reclinata</i>	beach clustervine	200	State/Federal endangered
<i>Lantana depressa</i> var. <i>floridana</i>	Florida lantana	44	State endangered
<i>Passiflora suberosa</i>	corkystem passionflower	24	
<i>Pentalinon luteum</i>	wild allamanda	19	
<i>Pithecellobium keyense</i>	blackbead	55	
<i>Psychotria nervosa</i>	wild coffee	4	
<i>Randia aculeata</i>	white indigoberry	64	
<i>Scaevola plumieri</i>	inkberry	61	State threatened
<i>Serenoa repens</i>	saw palmetto	83	
<i>Sesuvium portulacastrum</i>	sea purslane	29	
<i>Sophora tomentosa</i> var. <i>truncata</i>	necklace pod	35	Locally rare
<i>Suriana maritima</i>	bay cedar	63	Locally rare
<i>Uniola paniculata</i>	sea oats	1400	Federally protected
<i>Zamia pumila</i>	coontie	64	
<i>Zanthoxylum coriaceum</i>	Biscayne prickly ash	5	State endangered

Agapostemon splendens

Metallic Halictid Bee

- Found in pineland and dune habitats
- Underground nesters need open sandy areas to nest
- Known pollinator of federally endangered *Jacquemontia reclinata*



Passiflora suberosa

Corkystemmed passionflower

- Planted during revegetation
- Larval host plant for gulf fritillary, julia and zebra longwing butterflies



Crotalaria rotundifolia

Rabbit bells

- Naturally recruited into restored dune



- **Larval host:**
Ceranus blue butterfly and Bella moth



- ~1200 total volunteers
- ~3700 volunteers hours
- 2405 plants installed
- 40,400 m² or ~10 acres restored or under restoration

COASTAL DUNE RESTORATION PROGRAM

This dune habitat was returned to its natural state through a restoration project that replaced non-native and invasive plant species with vegetation native to our South Florida dune ecosystem.

For more information, please contact the Miami Surfrider Foundation Chapter at miami@surfrider.org or contact the City of Miami Beach at 305.673.7080.



MIAMI BEACH

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